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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,496	05/10/2001	Kaoru Murata	0425-0837P	5554

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EXAMINER	
THERKORN, ERNEST G	
ART UNIT	PAPER NUMBER
1723	

DATE MAILED: 11/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/831,496	MURATA ET AL.	
	Examiner	Art Unit	
	Ernest G. Therkorn	1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- *Extensions of time may be available under the provisions of* 37 CFR 1.136(a). *In no event, however, may a reply be timely filed* after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,8-13 and 16-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,8-13 and 16-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ *Copies of the certified copies of the priority documents have been received in this National Stage* application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ *The translation of the foreign language provisional application has been received.*

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ *Information Disclosure Statement(s) (PTO-1449) Paper No(s)* _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ *Other:* .

Claims 2, 8-13, and 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are directed to an improper Markush group. The species do not "(1) share a common utility, and (2) share a substantial structural feature disclosed to be essential to that utility."

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 8, 16/8, 17/16/8, and 18/8 are rejected under 35 U.S.C. 102(B) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Koch (U.S. Patent No. 4,475,821). The claims are considered to read on Koch (U.S. Patent No. 4,475,821). However, if a difference exists between the claims and Koch (U.S. Patent No. 4,475,821), it would reside in optimizing the steps and elements of Koch (U.S. Patent No. 4,475,821). It would have been obvious to optimize the steps and elements of Koch (U.S. Patent No. 4,475,821) to enhance separation.

Claims 2, 8-13, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakawa (U.S. Patent No. 5,117,109) in view of Koch (U.S. Patent No. 4,475,821). At best, the claims differ from Asakawa (U.S. Patent No. 5,117,109) in reciting a flow velocity gradient of 250 microliters per minute or less. Koch (U.S. Patent No. 4,475,821) (column 1, lines 11-30) discloses that a flow rate of 100 microliters per minute is frequently used in chromatography. It would have been obvious to use a flow of 100 microliters per minute in Asakawa (U.S. Patent No. 5,117,109) because Koch (U.S. Patent No. 4,475,821) (column 1, lines 11-30) discloses that a flow rate of 100 microliters per minute is frequently used in chromatography.

Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakawa (U.S. Patent No. 5,117,109) in view of Koch (U.S. Patent No. 4,475,821) as applied to claims 2, 8-13, and 16-18 above, and further in view of Snyder, Introduction to Modern Liquid Chromatography, 1979, pages 560-561. At best, the claims differ from Asakawa (U.S. Patent No. 5,117,109) in view of Koch (U.S. Patent No. 4,475,821) in reciting analyzing a trace amount of a component. Snyder, Introduction to Modern Liquid Chromatography, 1979, pages 560-561 discloses that liquid chromatography is a powerful and widely used technique for analyzing trace components. It would have been obvious to analyze trace component in Asakawa (U.S. Patent No. 5,117,109) in view of Koch (U.S. Patent No. 4,475,821) because Snyder, Introduction to Modern Liquid Chromatography, 1979, pages 560-561 discloses that liquid chromatography is a powerful and widely used technique for analyzing trace components.

The remarks urge that the species share a substantial structural feature disclosed to be essential to that utility. However, the structural feature disclosed to be essential to the utility of one species is that the solvent inlet tube and the solvent outlet tube have different diameters. The structural feature disclosed to be essential to the utility of the other species is a solvent outlet tube connected to a solvent inlet by a connecting part having a diameter that is larger than the diameters of the solvent inlet and solvent outlet tube. As such, the structural features disclosed to be essential to that utility are different. Accordingly, the claims are directed to an improper Markush group.

The remarks appear to urge patentability based upon the allegation that Koch (U.S. Patent No. 4,475,821) and Asakawa (U.S. Patent No. 5,117,109) do not show a diffusion promoting device just before a separation column. However, Koch (U.S. Patent No. 4,475,821) on column 3, lines 56-58 discloses that mixing chamber 23 is connected to a chromatographic analytical instrument. Koch (U.S. Patent No. 4,475,821) on column 4, lines 36-38 discloses that mixing chamber 23 is illustrated in Figures 2 and 3. The diffusion promoting device reads on these figures. Accordingly, Koch (U.S. Patent No. 4,475,821) discloses a diffusion promoting device just before a separation column. In addition, Asakawa (U.S. Patent No. 5,117,109) on column 6, lines 30-35 discloses use of a pipe of larger diameter than the rest of the pipes in the system going into the separation column. The diffusion promoting device reads on this structure. Accordingly, Asakawa (U.S. Patent No. 5,117,109) discloses a diffusion promoting device just before a separation column.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to E. Therkorn at telephone number (703) 308-0362.

Ernest G. Therkorn
Primary Examiner
Art Unit 1723

EGT
November 6, 2003